

REMARKS

Claims 1-7 are all the claims pending in the application and stand rejected.

Allowable Subject Matter

Applicants thank the Examiner for indicating that claims 3-7 would be allowed if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, Applicants hold such a rewriting in abeyance at this time.

Claim Rejection - 35 U.S.C. § 103(a)

The Examiner rejected claims 1-2 under § 103(a) as being unpatentable over Masashi et al. (JP 2002111250; “Masashi”) in view of Kledzik et al. (US 6,487,078; “Kledzik”). Applicants respectfully traverse this rejection for the reasons set forth below.

Claim 1 recites, *inter alia*, a resin-made insulating heat shield inserted between the printed circuit board and the first main unit, wherein a lead hole for allowing the lead to pass therethrough and a first fixing hole for allowing the fixing element to pass therethrough are provided in the heat shield.

In the rejection, the Examiner contends that Masashi discloses most of the features in claim 1, but concedes Masashi fails to disclose a heat shield made of resin or which includes a lead hole for allowing the lead to pass therethrough. To compensate for Masashi’s deficiencies, the Examiner relies on Kledzik. Specifically, the Examiner contends that Kledzik discloses a heat shield 101 made of resin (col. 4, lines 52-55). Further, the Examiner alleges Kledzik discloses a lead hole 106 for allowing a lead 502 to pass therethrough (*also citing* FIG. 6).

In response, Applicants submit the Examiner has failed to establish *prima facie* obviousness as Kledzik fails to support either of these assertions.

Accordingly, Applicants respectfully submit that even if combined as suggested, neither Masashi nor Kledzik teach the use of a resin-made insulating heat shield inserted between the printed circuit board and the first main unit or a lead hole. First, Masashi merely discloses the use of a "fixing spacer" 141 inserted between a module 121 and a printed circuit board 111. (*see* Masashi paragraph [0014]-[0016]). The function of this fixing spacer 141 is to prevent solder crack associated with the weight of the heat sink 131, (*see* Masashi paragraph [0009], and to reduce the continuous or intermittent vibration of a compressor or fan, *see* Masashi paragraph [0011]. Additionally, Masashi fails to disclose that this fixing spacer 141 is made of resin. Thus, Masashi fails to disclose or even fairly suggest the recited resin-made insulating heat shield. Further, Masashi also fails to disclose a lead hole for allowing a lead to pass through in fixing spacer 141. Rather, leads 171 are external to the fixing spacer 141. (*See* FIG. 1(a)).

Secondly, in contrast to the Examiner's contention, Kledzik also fails to disclose the use of a resin-made insulating heat shield, let alone the conventionality of such a heat shield. Rather, the portion relied on by the Examiner is directed to a dielectric body 101, which is an electrical insulator, not a heat insulator. Moreover, Kledzik also fails to disclose it is conventional to use such a dielectric body 101 between a heat generating portion and a printed circuit board. Rather, as illustrated in FIG. 5, Kledzik disclose that this dielectric body 101 is placed between a first integrated circuit package 501 and a second integrated circuit package 507. In fact, Kledzik fails to show any dielectric body 101 positioned between the second integrated circuit 507 and the

printed circuit board 503. (See FIG. 5). As such, Applicants note that the dielectric body 101 is positioned differently and used for a different function than Masashi's fixing spacer 141. As such, even if the dielectric body could be construed as a heat shield (which Applicants submits is improper) Applicants submit there is no logical basis for modify Masashi's fixing spacer 141 in view of this dielectric body 101. Accordingly, the Examiner's purported rational to combine that it would be obvious to modify the fixing spacer 141 in view of the dielectric body 101 is entirely unsupportable.

Thus, Applicants submit the Examiner has failed to establish *prima facie* obviousness for this reason.

Furthermore, Applicants also note that Kledzik fails to disclose that the heat shield has a lead hole 106 for allowing a lead 502 to pass therethrough. Rather, the pad 106, which the Examiner asserts as corresponding to the recited lead hole, is merely conductively bond to the carrier leads 108. (col. 4, line 67 through col. 5, line 1). It does not permit the leads to pass through the dielectric body. Rather, Kledzik discloses that an internally plated aperture 107 connects the adjacent surfaces. Thus, Kledzik fails to disclose the lead hole as recited in claim 1.

Therefore, even if Masashi and Kledzik are combined as suggested, they fail to disclose "a lead hole for allowing the lead to pass therethrough and a first fixing hole for allowing the fixing element to pass therethrough are provided in the heat shield," as recited in claim 1.

Accordingly, Applicants submit the Examiner has failed to establish *prima facie* obviousness for this additional reason.

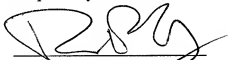
Thus, Applicants submit that claim 1 is patentably distinguishable over Masashi in view of Kledzik for at least those reasons set forth above. Additionally, Applicants submit claim 2 is patentable at least by virtue of its dependency.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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